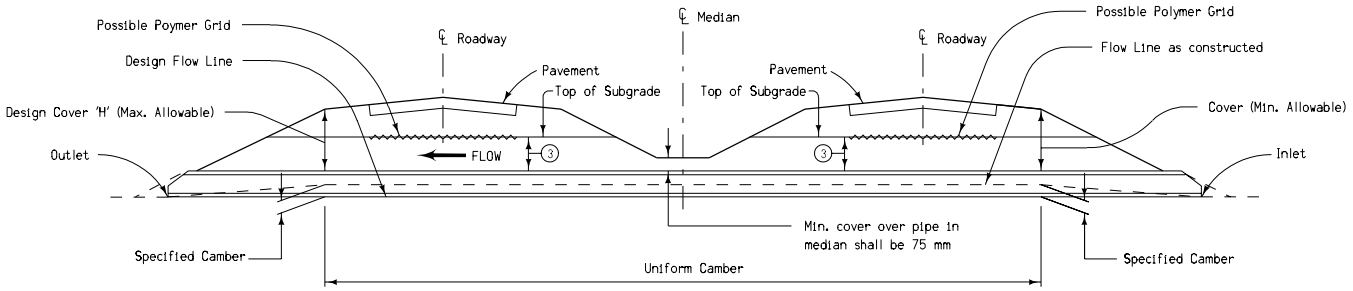
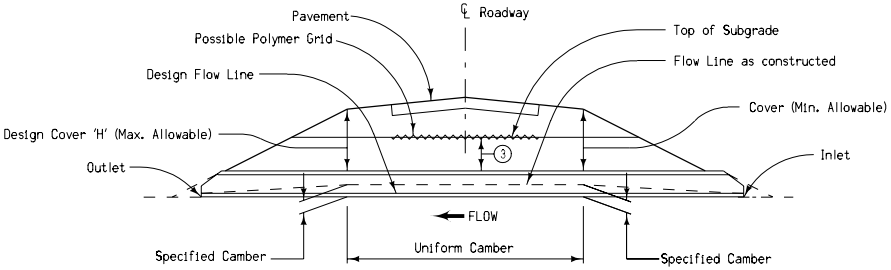
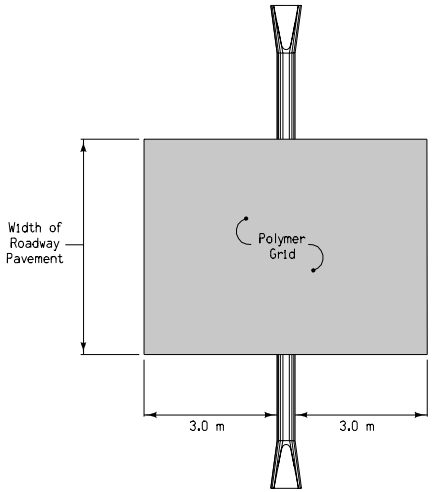


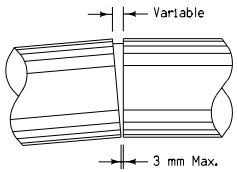
TYPICAL INSTALLATION DUAL ROADWAY



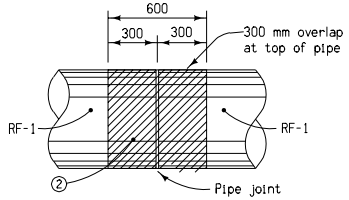
TYPICAL INSTALLATION SINGLE ROADWAY



POLYMER GRID
PLACEMENT DETAILS



TYPICAL JOINT IN CAMBERED PIPE ①



PIPE JOINT WRAPPING

Design Cover 'H' (m)	Normal Camber (mm)
1.5	25
3.0	50
4.5	75
6.0	100
7.5	125
9.0	150
10.5	175

Pipe Size 'D'	Max. Camber (mm)
600	330
750	360
900	390
1050	420
1200	450
1500	480
2100	510

ALLOWABLE CAMBER TABLES

GENERAL NOTES:

Details shown hereon illustrate construction requirements for installation of roadway culverts. Pipe culverts shall be of the kind and classification specified on detail project plans.

COVER:

Minimum and maximum allowable cover for pipe culverts shall be as shown on the appropriate Standard Road Plans for the particular kind of culvert, as follows:

RF-31 Depth of Cover Tables for Concrete Pipe
RF-32 Depth of Cover Tables for Corrugated Pipe
RF-33 Depth of Cover Tables for Corrugated Pipe

CAMBER:

Camber is the dimension above a straight line between inlet and outlet elevation. Some settlement of the structure is usually anticipated, resulting in the design flow line between inlet and outlet. Camber is developed uniformly from inlet and outlet to a point beneath the outside shoulder lines of the roadway and is uniform between those points, as indicated hereon. The camber indicated in the "Allowable Camber Tables" should be used unless specific camber values are indicated elsewhere in the plans.

Camber for concrete pipe is accomplished by placing pipe sections tight at the bottom of the joint with opening at top of joint variable. Camber for corrugated metal pipe shall be accomplished as directed by the Engineer.

JOINT WRAPPING:

All joints on concrete pipe roadway culverts shall be wrapped as shown on the details hereon.

Engineering fabric for embankment erosion control, see Standard Specification 4196.01C.

POLYMER GRID:

All shallow pipe installations require the use of Polymer Grid. Place directly on top of the subgrade as shown on the details hereon. Placement of polymer grid shall be Incidental to the culvert bid Item.

Polymer Grid is required if distance from top of pipe to top of subgrade is less than 0.9 meters.

All dimensions given in millimeters unless noted.

M
METRIC VERSION

Iowa Department of Transportation
Highway Division

STANDARD ROAD PLAN RF-30B

REVISION: Add camber tables and polymer grid details.

REVISION NO. 6

REVISION DATE 04-30-02

William J. Stein
APPROVED BY DESIGN METHODS ENGINEER

PIPE CULVERT INSTALLATION DETAILS
(COVER AND CAMBER)